

Work Order ID 152022

152022

Page 1

Tuesday, October 18, 2016 4:24:52 PM

Item ID:	D4950-041	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:					Stop	*NS2*
Item Name:	Tailboom Mount					
Start Date:	10/18/2016	Start Qty:	1.00			
Required Date:	10/20/2016	Req'd Qty:	1.00			
Reference:						

SCRAP

Approvals:	Process Plan: <u>Em</u>	Date: <u>10/10/19</u>	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4950	B								
100	Small Fab	0.00							
100	Small Fab	0.00							
Small Fab	Memo								
	1- Assemble with a thin layer of Proseal between the mating surfaces as per dwg								
	D4950								
	A/R Proseal 890 batch: <u>135390</u>								
110	QC5- Inspect part completeness to step on W/O	0.00							
110	QC	0.00							
Quality Control	Memo								
113		0.00							
113	SprayPaint	0.00							
Spray Painting	Memo								
	Prime as per dwg and QSI								
	A/R Primer Batch: _____								

DAS
6
9-89

DAS
36
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DAS
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9-89

OCT 20 2016
P.T.O.

DQA:

Date: Jan 4 2017



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: DEC 12 2016

Work Order update only ☐

Work Order: <u>152022</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. <u>D4950-041</u>		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☒		
NCR No. <u>16-6149</u>		Scrap ☒		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐			
Date: <u>16-10-20</u>		Step #: <u>110</u>		QTY Effective: <u>1</u>			MRB (QSI042) Approval		
							DAS 9 9-89 16-10-20		
Description Work Order Deviation				Disposition				Completed By	
Part was made as aluminium (Rev A) but now they need to be made as stainless steel (Rev B) Drawn/Engineer changes part was not check in store at the time of new drawing.				Scrap / destroy no replace				38 9-89	
								OCT 20 2016	
								Lead hand / Supervisor Approval Verification	
								DAS 9 9-89 16-10-20	
								QC / QA Coordinator Approval	
								DAS 9 9-89 16-10-20	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☒	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☒	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☒	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Work Order ID 152022***152022***

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Item ID: D4950-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Tailboom Mount

Start Date: 10/18/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 10/20/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
115	QC14- Inspect Spray Paint	0.00							
115									
QC	Memo	0.00							
Quality Control									
120	Identify as per dwg & Stock Location: _____	0.00							
120									
Packaging	Memo	0.00							
Packaging									
130	QC21- Final Inspection - Work Order Release	0.00							
130									
QC	Memo	0.00							
Quality Control									

OCT 20 2016

DAS
21
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER :			

Picklist Print

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Work Order ID: 152022

152022

Parent Item: D4950-041

D4950-041

Parent Item Name: Tailboom Mount

Start Date: 10/18/2016

Required Date: 10/20/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 13.09.24 NEW ISSUE DD VERF:JLM IPP
REV:B 14.01.16 AS PER DWG REV.B DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4950-1 *D4950-1* Mount		Manufactured	No				Each	2.0000		1			
									**	OCT 19 2016			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST139				2					
				107465				2					
D3868-1 *D3868-1* Spacer		Manufactured	No				Each	23.0000		2			
									**	OCT 19 2016			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST056				23					
				111657				23					
MS20426AD3-6 *MS20426AD3-6* Rivet		Purchased	No				Each	2,848.000		4			
									**				
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				1864					
				M133988				1864					
				ST312				984					
				M133988				984					

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M4533

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16/10/18

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DQA: _____ Date: _____



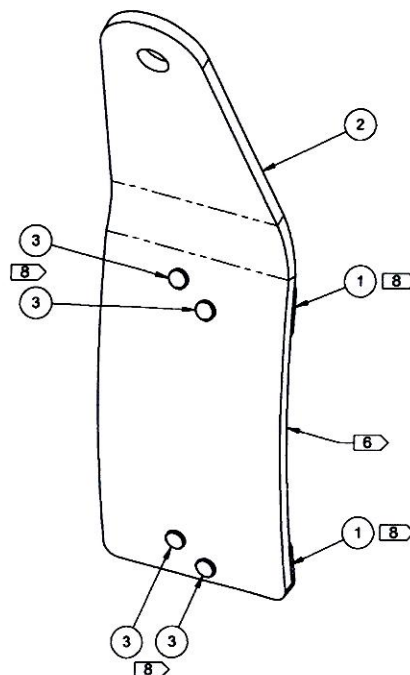
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

ITEM NO.	QTY	PART NUMBER	DESCRIPTION
	X	D4950-041	TAILBOOM MOUNT
1	2	D3868-1	SPACER
2	1	D4950-1	MOUNT
3	4	MS20426AD3-6	RIVET



D4950-041 TAILBOOM MOUNT

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME ASSEMBLY PER QSI 005
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4950-041" AND B/N PER DART QSI 044 6.1 (FINE POINT PAINT MARKER)
- 7) WEIGHT: 0.36 lbs
- 8) APPLY A THIN LAYER OF PROSEAL 890 BETWEEN THE MATING SURFACES OF D3868-1 AND D4950-1 AND INSTALL RIVETS WET

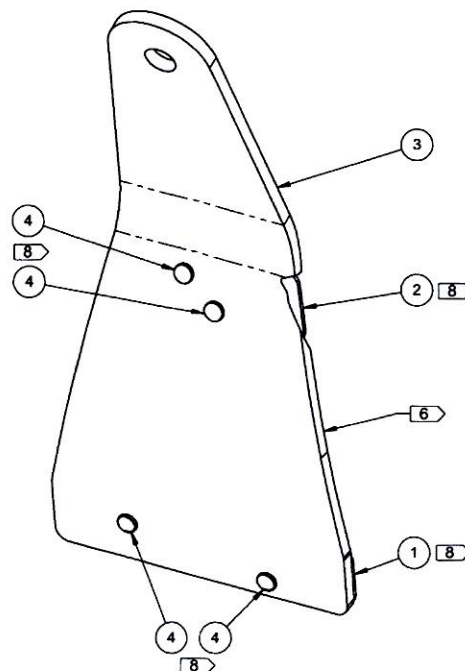


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2014-01-15

B	MATL FOR D4950-1/3 WAS 6061-T6 (ZN A5-4/6); REDESIGNED D4950-1/1-3P 0.25 LONGER (ZN B5-4/6); ADD NOTE 8 (ZN A4-1/2). REASON: PARTS-318.	MB	13.12.11
A	NEW ISSUE	MB	13.09.23
REV.	DESCRIPTION	BY	DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	DD	D4950	SHEET 1 OF 6
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DE APPR.	DS	MOUNT	NTS
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APPROVED

ITEM NO.	QTY -043	PART NUMBER	DESCRIPTION
	X	D4950-043	TAILBOOM MOUNT
1	1	D3868-3	SPACER
2	1	D3868-5	SPACER
3	1	D4950-3	MOUNT
4	4	MS20426AD3-6	RIVET



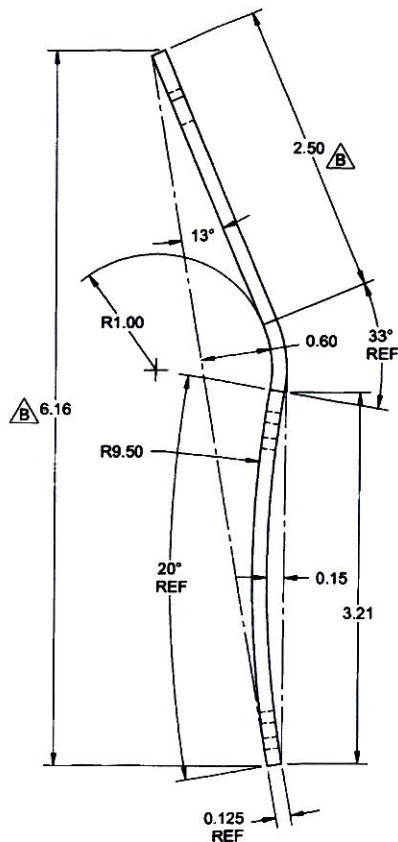
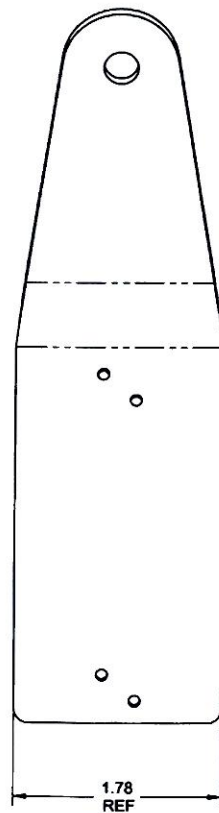
D4950-043 TAILBOOM MOUNT

NOTES:

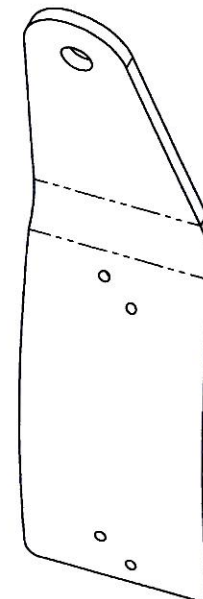
- 1) MATERIAL: N/A
- 2) FINISH: PRIME ASSEMBLY PER QSI 005
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4950-043" AND B/N PER DART QSI 044 6.1 (FINE POINT PAINT MARKER)
- 7) WEIGHT: 0.44 lbs
- 8) APPLY A THIN LAYER OF PROSEAL 890 BETWEEN THE MATING SURFACES OF D3868-3/-5 AND D4950-3 AND INSTALL RIVETS WET

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DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	DD	D4950	SHEET 2 OF 6
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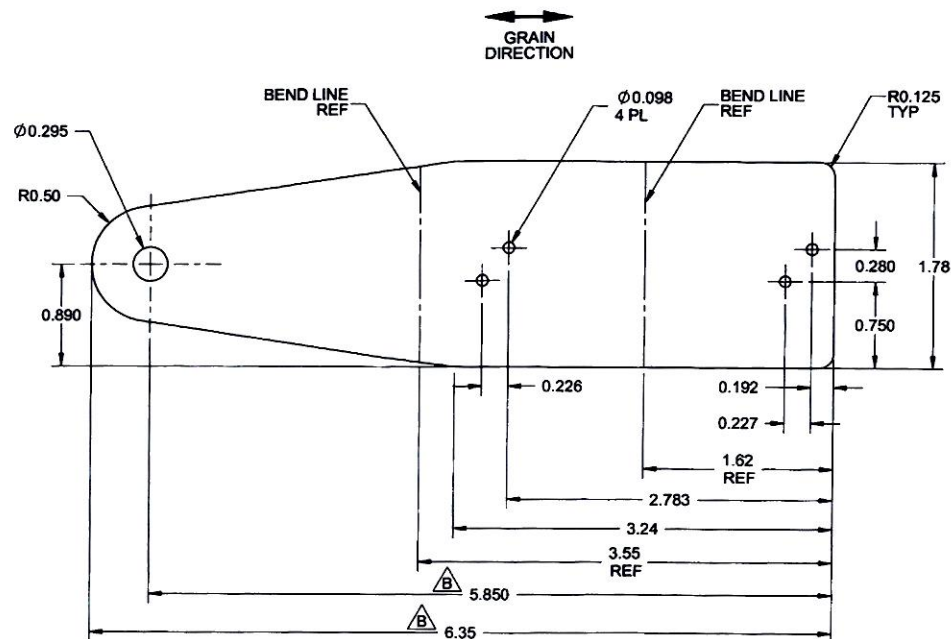
D4950-1 MOUNT



- NOTES:**
 1) MATERIAL: MAKE FROM D4950-1F
 2) FINISH: NONE
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 6) IDENTIFICATION: N/A
 7) WEIGHT: 0.35 lbs

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 2014-01-15

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	DRAWN	MB		
	CHECKED	AP	DRAWING NO. D4950	REV. B
	MFG. APPR.	DD	SHEET 3 OF 6	
	APPROVED	MP	TITLE	SCALE
	DE APPR.	DS	MOUNT	NTS
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D4950-1F FLAT PATTERN

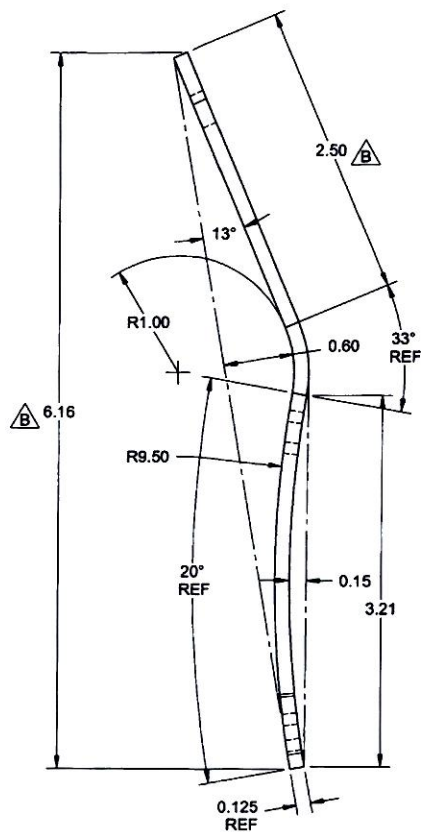
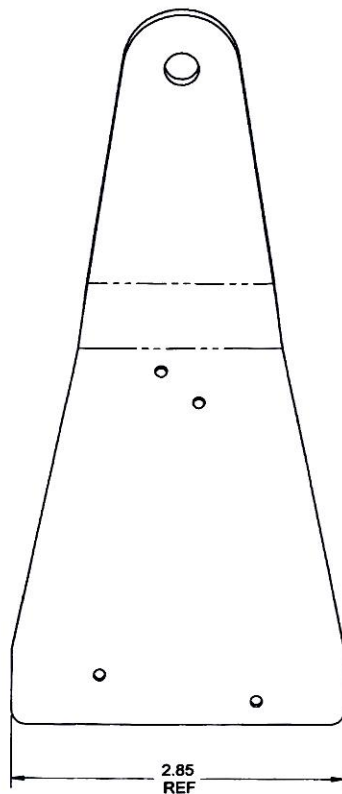
NOTES:

- 1) MATERIAL: 17-4PH STAINLESS STEEL SHEET, 11 GA (0.125 THICK), PER AMS 5604 $\triangle$
MIN YIELD STRENGTH = 105 KSI
MIN ULTIMATE STRENGTH = 135 KSI
REF DART SPEC M17-4-S11GA
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.35 lbs

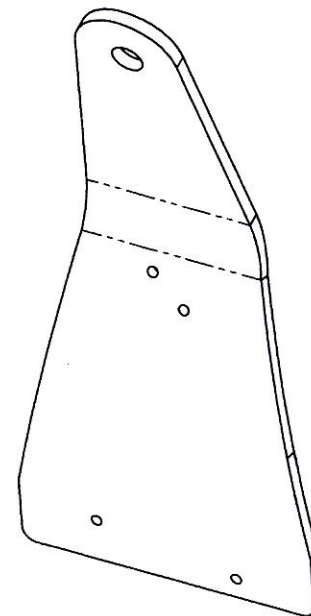
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DRAWN	MB		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	DD	D4950	SHEET 4 OF 6
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D4950-3 MOUNT

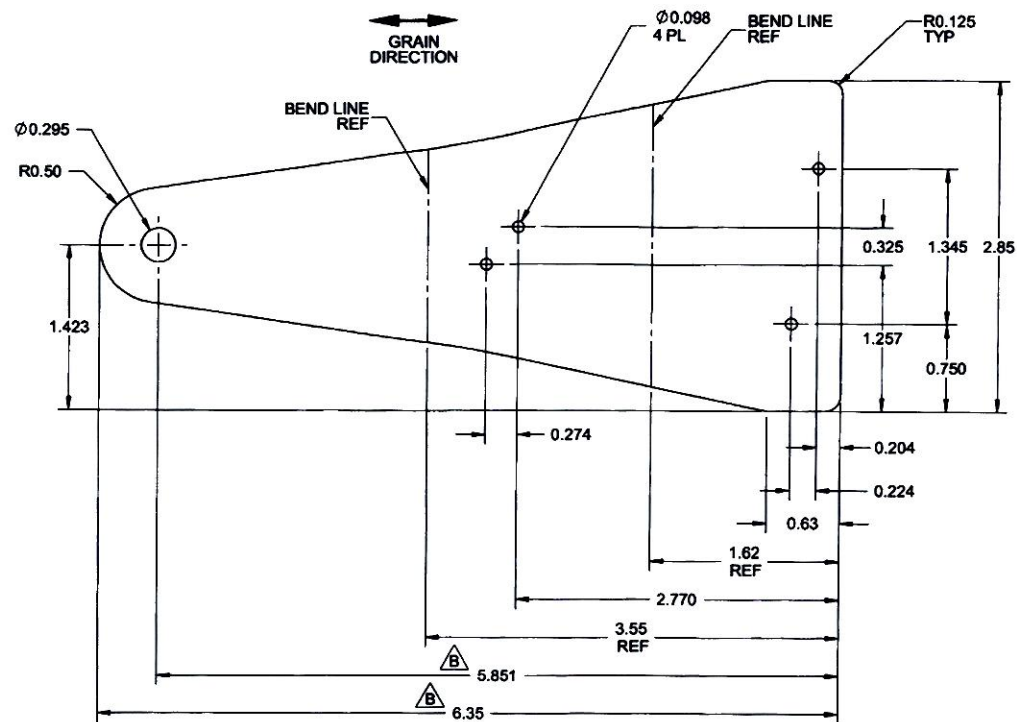


- NOTES:**
- 1) MATERIAL: MAKE FROM D4950-3F
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.42 lbs

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DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	DD	D4950	SHEET 5 OF 6
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2014-01-15



D4950-3F FLAT PATTERN

NOTES:

- 1) MATERIAL: 17-4PH STAINLESS STEEL SHEET, 11 GA (0.125 THICK), PER AMS 5604 B
- MIN YIELD STRENGTH = 105 KSI
- MIN ULTIMATE STRENGTH = 135 KSI
- REF DART SPEC M17-4-S11GA
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.42 lbs

APPROVED

DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	MB		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	DD	D4950	SHEET 6 OF 6
APPROVED	MP	TITLE	SCALE
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2014-01-15